

4.2 GROUNDWATER SYSTEMS WITH PRIMARY DISINFECTION USING UV AND SECONDARY DISINFECTION USING CHLORINATION



*A Tool for Owners and Operators of Drinking Water Systems Serving Designated Facilities**

* Designated facilities are drinking water systems serving non-residential and seasonal residential facilities for people who may be more susceptible to illness from drinking water of poor quality. Facilities served by municipal or non-municipal year-round residential systems are not included in this category. Designated facilities include children's camps; child and youth care facilities including day nurseries; health care facilities; social care facilities receiving funding from the Ontario government; hostels; schools and private schools; and universities, colleges, or other degree granting institutions.

The following table is intended to assist owners and operators of drinking water systems serving designated facilities keep track of their routine sampling requirements throughout the calendar year. You are not required by the Ministry of the Environment to use this form; it is only meant as a convenient tracking tool.

For other sampling schedules, consult with your Drinking Water Inspector. For guides and fact sheets related to drinking water, please visit the Ministry of the Environment's Drinking Water Ontario website at www.ontario.ca/drinkingwater or contact the Public Information Centre at picemail.moe@ontario.ca or 1-800-565-4923.

NOTES

- The specific sampling/testing days and months noted in the form are **only a suggestion**. You are free to select other sampling/testing days as long as you maintain the minimum number of days/hours between samples set by the regulation for twice a week, every two weeks, monthly and quarterly sampling/testing.
- "Distribution sample" means a water sample that is taken, in the distribution system or in plumbing that is connected to the drinking water system, from a point significantly beyond the point at which drinking water enters the distribution system or plumbing.
- **Depending on the facts, e.g., the number of days the system is not supplying water to a facility, certain sampling exemptions may apply.**
- This tool does not replace requirements for proper record-keeping. For every sample, you must record the date and time the sample was taken, the location where the sample was taken and the name of the person who took the sample. For chlorine residual and turbidity testing, also record the results of the test.
- As sampling requirements change from time to time, check with your Drinking Water Inspector or the Ministry of the Environment's Drinking Water Ontario website at www.ontario.ca/drinkingwater for updates.
- To be clear about your specific requirements, refer to the Drinking Water Systems Regulation (O. Reg. 170/03) and the Safe Drinking Water Act, 2002. You can access these at www.e-laws.gov.on.ca or by calling the ministry's Public Information Centre at 1-800-565-4923.
- If you have any legal questions about the application or interpretations of regulations or legislation, you should consult a lawyer.

KEEPING TRACK FOR THE YEAR: _____

Check off ☒ each sample when completed.

Month	Twice per week	Monthly	Quarterly	Annually	Every 60 months
	<p>What: On-site free chlorine residual testing.</p> <p>From where: Take samples from the distribution system. Rotate sampling from different locations throughout your distribution system.</p> <p>How often: Twice per week</p>	<p>What: Sample from raw water and from the distribution system or plumbing for microbiological analysis by lab (<i>E. coli</i>, total coliforms). Sample for Heterotrophic plate count from the distribution system. Turbidity sampling is only required for large non-residential systems, provided that the UV treatment meets the requirements in the regulation and has a feature that ensures that no water is directed to users of the system in the event that the equipment malfunctions, loses power or does not provide the appropriate level of disinfection. Sample from raw water for turbidity testing either on-site or by lab – must be analyzed within 48 hours.</p> <p>From Where: Take one sample from each well and one sample from the distribution system/plumbing.</p> <p>How often: Minimum once per month.</p>	<p>What: Sample from drinking water for chemical analysis for Nitrate and Nitrite by lab.</p> <p>From Where: Take one sample from the point where water enters distribution system or plumbing that is connected to the drinking-water system.</p> <p>How often: Once every three months.</p>	<p>What: Sample from plumbing for lead analysis by lab.</p> <p>From where: Take one sample from the distribution system.</p> <p>How often: Once every 12 months. The frequency is reduced to once every 36 months if in the most recent 24-month period no lead test results have exceeded the standard for lead, 10 micrograms per litre. This reduction does not apply to schools, private schools or day nurseries as they are subject to O. Reg. 243/07.</p> <p>Drinking water systems that serve only a school, private school or day nursery must follow the lead flushing and sampling requirements in O. Reg. 243/07.</p>	<p>What: Sample from drinking-water for chemical analysis for the Inorganic parameters of Schedule 23, Organic parameters of Schedule 24, Sodium and Fluoride by lab.</p> <p>From Where: The point where water enters distribution system or plumbing that is connected to the drinking water system.</p> <p>How often: Once every 60 months.</p>

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Month	Twice per week	Monthly	Quarterly	Annually	Every 60 months
January	<div>e.g. EVERY MONDAY <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></div> <div>e.g. EVERY WEDNESDAY <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></div>	<div>e.g. FIRST MONDAY OF THE MONTH</div> <div>Microbiological <i>Raw water</i> <input type="checkbox"/> Well No.1 <input type="checkbox"/> Well No.2 <i>Distribution system/plumbing</i> <input type="checkbox"/></div> <div>Turbidity (Only for large non-residential systems) <input type="checkbox"/> Well No.1 <input type="checkbox"/> Well No.2</div>	<div>Nitrate <input type="checkbox"/></div> <div>Nitrite <input type="checkbox"/></div>	<div>e.g. FIRST MONDAY OF THE YEAR unless frequency is reduced to once very 36 months.</div> <div>Lead <input type="checkbox"/></div>	<div>Schedule 23 <input type="checkbox"/></div> <div>Schedule 24 <input type="checkbox"/></div> <div>Sodium <input type="checkbox"/></div> <div>Fluoride <input type="checkbox"/></div>
February	<div>e.g. EVERY MONDAY <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></div> <div>e.g. EVERY WEDNESDAY <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></div>	<div>e.g. FIRST MONDAY OF THE MONTH</div> <div>Microbiological <i>Raw water</i> <input type="checkbox"/> Well No.1 <input type="checkbox"/> Well No.2 <i>Distribution system/plumbing</i> <input type="checkbox"/></div> <div>Turbidity (Only for large non-residential systems) <input type="checkbox"/> Well No.1 <input type="checkbox"/> Well No.2</div>			

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March	<div>e.g. EVERY MONDAY <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></div> <div>e.g. EVERY WEDNESDAY <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></div>	<div>e.g. FIRST MONDAY OF THE MONTH</div> <div>Microbiological <i>Raw water</i> <input type="checkbox"/> Well No.1 <input type="checkbox"/> Well No.2 <i>Distribution system/plumbing</i> <input type="checkbox"/></div> <div>Turbidity (Only for large non-residential systems) <input type="checkbox"/> Well No.1 <input type="checkbox"/> Well No.2</div>			
April	<div>e.g. EVERY MONDAY <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></div> <div>e.g. EVERY WEDNESDAY <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></div>	<div>e.g. FIRST MONDAY OF THE MONTH</div> <div>Microbiological <i>Raw water</i> <input type="checkbox"/> Well No.1 <input type="checkbox"/> Well No.2 <i>Distribution system/plumbing</i> <input type="checkbox"/></div> <div>Turbidity (Only for large non-residential systems) <input type="checkbox"/> Well No.1 <input type="checkbox"/> Well No.2</div>	<div>Nitrate <input type="checkbox"/></div> <div>Nitrite <input type="checkbox"/></div>		

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May	<div>e.g. EVERY MONDAY</div> <div><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></div> <div>e.g. EVERY WEDNESDAY</div> <div><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></div>	<div>e.g. FIRST MONDAY OF THE MONTH</div> <div>Microbiological</div> <div>Raw water</div> <div><input type="checkbox"/> Well No.1</div> <div><input type="checkbox"/> Well No.2</div> <div>Distribution system/plumbing</div> <div><input type="checkbox"/></div> <div>Turbidity (Only for large non-residential systems)</div> <div><input type="checkbox"/> Well No.1</div> <div><input type="checkbox"/> Well No.2</div>			
June	<div>e.g. EVERY MONDAY</div> <div><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></div> <div>e.g. EVERY WEDNESDAY</div> <div><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></div>	<div>e.g. FIRST MONDAY OF THE MONTH</div> <div>Microbiological</div> <div>Raw water</div> <div><input type="checkbox"/> Well No.1</div> <div><input type="checkbox"/> Well No.2</div> <div>Distribution system/plumbing</div> <div><input type="checkbox"/></div> <div>Turbidity (Only for large non-residential systems)</div> <div><input type="checkbox"/> Well No.1</div> <div><input type="checkbox"/> Well No.2</div>			

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July	<p>e.g. EVERY MONDAY <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>e.g. EVERY WEDNESDAY <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>	<p>e.g. FIRST MONDAY OF THE MONTH</p> <p>Microbiological <i>Raw water</i> <input type="checkbox"/> Well No.1 <input type="checkbox"/> Well No.2</p> <p><i>Distribution system/plumbing</i> <input type="checkbox"/></p> <p>Turbidity (Only for large non-residential systems) <input type="checkbox"/> Well No.1 <input type="checkbox"/> Well No.2</p>	<p>Nitrate <input type="checkbox"/></p> <p>Nitrite <input type="checkbox"/></p>		
August	<p>e.g. EVERY MONDAY <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>e.g. EVERY WEDNESDAY <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>	<p>e.g. FIRST MONDAY OF THE MONTH</p> <p>Microbiological <i>Raw water</i> <input type="checkbox"/> Well No.1 <input type="checkbox"/> Well No.2</p> <p><i>Distribution system/plumbing</i> <input type="checkbox"/></p> <p>Turbidity (Only for large non-residential systems) <input type="checkbox"/> Well No.1 <input type="checkbox"/> Well No.2</p>			

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September	<div>e.g. EVERY MONDAY <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></div> <div>e.g. EVERY WEDNESDAY <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></div>	<div>e.g. FIRST MONDAY OF THE MONTH</div> <div>Microbiological Raw water <input type="checkbox"/> Well No.1 <input type="checkbox"/> Well No.2 Distribution system/plumbing <input type="checkbox"/></div> <div>Turbidity (Only for large non-residential systems) <input type="checkbox"/> Well No.1 <input type="checkbox"/> Well No.2</div>			
October	<div>e.g. EVERY MONDAY <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></div> <div>e.g. EVERY WEDNESDAY <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></div>	<div>e.g. FIRST MONDAY OF THE MONTH</div> <div>Microbiological Raw water <input type="checkbox"/> Well No.1 <input type="checkbox"/> Well No.2 Distribution system/plumbing <input type="checkbox"/></div> <div>Turbidity (Only for large non-residential systems) <input type="checkbox"/> Well No.1 <input type="checkbox"/> Well No.2</div>	<div>Nitrate <input type="checkbox"/></div> <div>Nitrite <input type="checkbox"/></div>		

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November	<p>e.g. EVERY MONDAY <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>e.g. EVERY WEDNESDAY <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>	<p>e.g. FIRST MONDAY OF THE MONTH</p> <p>Microbiological <i>Raw water</i> <input type="checkbox"/> Well No.1 <input type="checkbox"/> Well No.2</p> <p><i>Distribution system/plumbing</i> <input type="checkbox"/></p> <p>Turbidity (Only for large non-residential systems) <input type="checkbox"/> Well No.1 <input type="checkbox"/> Well No.2</p>			
December	<p>e.g. EVERY MONDAY <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>e.g. EVERY WEDNESDAY <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>	<p>e.g. FIRST MONDAY OF THE MONTH</p> <p>Microbiological <i>Raw water</i> <input type="checkbox"/> Well No.1 <input type="checkbox"/> Well No.2</p> <p><i>Distribution system/plumbing</i> <input type="checkbox"/></p> <p>Turbidity (Only for large non-residential systems) <input type="checkbox"/> Well No.1 <input type="checkbox"/> Well No.2</p>			